KEH, Z.

Decree of the Minister of Heavy Industry, no.129 of July 26, 1961 regarding a closer cooperation between sections of the Ministry of Heavy Industry and technical associations united in the Chief Technical Organization. Przegl mech 20 no.18:571 S '61.

Immunology

BULGARIA

KEHAYOV, I., Laboratory of Cytoimmunology, Institute of Microbiology, Bulgarian Academy of Sciences

"Studies on Antigenic Relations Between Guinea Pig Kidney and Lung"

Sofia, Doklady Bolgarskoy Akademii Nauk, Vol 19, No 12, 1966, pp 1219-1222

Abstract: [English article] The treatment of guinea pigs with rabbit anti-guinea-pig-kidney serum raises the percentage of localizations of the tuberculous infection in the kidney (I. R. Kekhayov, P"rvi kongres na mikrobiolozite v B"lgariya, Izd. BAN, 1965). The same phenomenon was established, although to a lesser degree, in the treatment of guinea pigs with heterologic anti-lung serum, which may be ascribed to the existence of antigen(s) common to kidney and lungs. The present communication contains some results of further studies on the antigenic relationship between the guinea pig's kidney and lung. Following a brief description of the materials (young rabbits) and methods used, it gives a detailed description and discussion of the results. An analysis of the data indicates that the complement-fixation test and the agar-gel precipitation test disclose that the antigenic mosaic of the guinea pig lung contains an antigen(s) common to the kidney antigens. This antigenic kinship of the two organs is considered significant for the specific organotropism of the tuberculous infection. References: 2 Bulgarian, 1 Soviet, and 7 Western. (Manuscript 1/1 received 7 Jul 66.)

KEHESY, A.

Color vision. Szemeszet 90 no.1:9-32 Feb 1953. (CLML 24:5)

1. Doctor Medical Sciences.

KEHIAIAN, HENRY V.

General study of the proteolytic equilibrium. I. The chemical equilibrium in aqueous solutions of a monobasic and a monoacidic base. Henry V. Kehiaian. *Bul. ref. populare Romine, Studii cercetări chim.* 3, 113-34 (1955). Math. Based on 6 definitions and 4 assumptions, a general equation is derived for aq. solns. of a monobasic acid and a monoacidic base, from which special and approximation formulas of the literature may be derived. W. J.

1 4 6 0 0

RUMANIA/Physical Chemistry - Solutions, Theory of Acids

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3935.

Author : Henry V. Kehiaian.
Inst :
Title : General Study of Protolytic Equilibrium. II. Chemical Equilibrium in Aqueous Solution of Acid and Base Mixture.

Orig Pub: Studii si cercetari chim., 1957, 5, No 1, 35-49.

Abstract: The equation of chemical equilibrium and its application to solutions of acids, bases and amphoteric substances (protolytes) was studied. The case of aqueous solutions produced by a mixture of polybasic acids and polybasic bases is discussed. The derived equation is a generalization of the equation derived earlier (part I, RZhKhim, 1956, 32081).

Card : 1/1

RUMANIA/Physical Chemistry - Solutions, Theory of Acids and Bases. B-11

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3936.

Author : Henry V. Kehiaian.
Inst :
Title : Composition of Boric Acids and Alkali Borates in Aqueous Solutions. I. Appendix to General Study of Protolytic

KEHIAIAN, H.

Studies on the liquid--liquid equilibrium. Pts. 1-3. Biul chim PAN 10 no.10:569-589 '62.

1. Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw. Presented by W. Swietoslawski.

KEHIAIAN, H.

Thermodynamics of chemically reacting mixtures. Pts. 1-3.
Bul chim PAN 11 no.8:479-496 '63.

1. Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw. Presented by W. Swietoslawski.

KEHIAIAN, H.; SOSNOWSKA-KEHIAIAN, K.

Thermodynamics of chemically reacting mixtures. Pt.4. Bul chim PAN 11 no.9:549-556 '63.

1. Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw. Presented by W. Swietoslawski.

KEHIAIAN, H.

Thermodynamics of chemically reacting mixtures. Pt. 7.
Bul chim PAN 12 no. 1:77-83 '64.

1. Institute of Physical Chemistry, Polish Acdemy of Sciences, Warsaw. Presented by W. Swietoslawski.

KEHIAIAN, H.; FAJANS, A.

Thermodynamics of chemically reacting mixtures. Pt. 8. Bul chim PAN 12 no.4:255-262 '64.

1. Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw. Presented by W. Swietoslawski.

[illegible]BRIAN, H.

Thermodynamics of chemically reacting electrons. Pt. 9. Bul chim PAN 12 no.5:323-329 '64.

1. Institute of Physical Chemistry, [illegible] of Sciences, Warsaw. Presented by W. Swietoslawski.

KEHIAIAN, H., SOSNKOWSKA-KEHIAIAN, K.

Thermodynamics of chemically reacting [illegible] Pt.10-11.
Bul chim PAN 12 no.6:429-439 '64.

1. Institute of Physical Chemistry of the Polish Academy of Sciences, Warsaw. Submitted April [illegible], 1964.

KEHIAIAN, H.

Thermodynamics of chemically reacting mixtures. Pt.12. Bul chim PAN 12 no.7:497-501 '64.

1. Institute of Physical Chemistry of the Polish Academy of Sciences, Warsaw. Submitted May 27, 1964.

KEHIAIAN, H.

Thermodynamics of chemically reacting mixtures. Pt.13. Bul chim PAN 12 no.8:567-573 '64.

1. Institute of Physical Chemistry of the Polish Academy of Sciences, Warsaw. Submitted June 20, 1964.

KEHIAIAN, H.

Thermodynamics of chemically reacting mixtures. Pt.14. Bul chim PAN 9[i.e. 12] no.9:675-679 '64.

1. Institute of Physical Chemistry of the Polish Academy of Sciences, Warsaw. Submitted July 16, 1964.

KEHIAIAN, K.; SOSNOWSKA-KEHIAIAN, K.

Thermodynamics of chemically reacting mixtures. Pt. 5-6.
Bul chim PAN 11 no.10:583-596 '63.

1. Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw. Presented by W. Swietoslawski.

KEHL, JERZY

Distr: 4E2c(j)/4E3d

Formaldehyde condensation. I. Stanisław Malinowski, Jerzy Kehl, and Stanisław Tyrlik (Politechnika, Warsaw). *Roczniki Chem.* 34, 391–400(1960)(English summary).—Condensation of HCHO (I) to polyalc. aldehydes was studied in presence of various catalysts. PbO (II), obtained by decompn. of Pb oxalate at low temps., was found to form an active complex with I, whereas II prepd. at high temps. was inactive. Oxides of other common metals (except CaO and MgO) were inactive as well as organolead compds. contg. the Pb(OH) group, or complexes of II with glycol or glyceraldehyde, acetylacetone, or acetoacetates.
A. Kręglewski

6
1-BW(BW)
1-TAJ(NB)
2

Zakład Technologii Organicznej I Politechniki, Warszawa.

KEHLER, Miro

Development of telegrams from the beginning of society up to our days.
PTT zbor 16 no.1/2:34-36 F '62.

KARSAY, Gyula, Dr.; KEHLI, Istvan, Dr.; KORANYI, Andras, Dr.

Pathography and therapy of intracerebral vascular attacks with special regard to ACTH therapy. Orvn. hetil. 99 no.31:1049-1053 3 Aug 58.

1. A Janos Korhaz-rendelointezet (igazgato: Tako Jozsef dr.) I. sz. Belosztalyanak (foorvos: Koranyi Andras dr.) kozlemenye.

(CEREBRAL HEMORRHAGE, ther.
ACTH intravenous drop infusion (Hun))
(ACTH, ther. use
cerebral hemorrh., intravenous drop infusion (Hun))

CA KEHREN, M.

The spontaneous combustion of oiled textiles M. Kehren. *Textil-Rundschau* 3, 409-17(1948); *Chem. Zentr.* (Russian Zone Ed.) 1949, I, 943.—The spontaneous combustion of oiled textiles is caused by the use of several unsatd. compds., such as linoleic or linolenic acid, or their glycerides, in the oiling preps. Such preps. are best tested with the Mackey test, which gives the relation between spontaneous temp. increase and time. Six curves are given showing the behavior of textile olein, mineral oil, water-emulg. fat-base dressing oils, and the influence of mineral soaps on such oils. Mineral oils are safe, even in the presence of metal soaps (Fe, Cr). The spontaneous oxidation can be retarded by anticatalysts such as β-naphthol or hydroquinone. Further suggestions are offered for the prevention of spontaneous combustion. M. G. Moore

CA KEHREN M.

Rubber poisons: origin and removal from textiles. M. Kehren. *SVF Fachorgan Textilveredl.* (Basel) 4, 111–4, 165–70(1949).—The chemistry of natural and synthetic rubbers, and chem. agents, e.g., Cu, Mn, Fe, Co, oils, and acids, which promote their "perishing" on textiles are discussed. The sources and detection of rubber poisons, especially traces of Cu and Mn, are reviewed, and the use of Trilon B for removing these metals is discussed. B. A.

KEHREN, A. H.

Journal of the Science of Food and Agriculture
Jan. 1954
Sanitation

(2)

Iron treatment of textile waste-waters. I. M. Kehren and H. Denks (*Z. ges. Text. Ind.*, 1953, **55**, No. 8, 417–426; *J. Text. Inst.*, 1953, **44**, A551).—The removal of suspended matter from textile waste-water by means of treatment with Fe salts or metallic Fe (-warf) is still the subject of investigation, the nature of the colloid reactions involved being, as yet, uncertain. Possible physical and chemical processes involved are discussed and the application of the Fe treatment method to practical water purification, particularly in relation to textile processing effluent, is described.

R. B. CLARKE.

KEHYYERDAL, Tur[Heyerdahl, Thor] (Norvegiya)

Seaways to Polynesia. Priroda 52 no.1:75-84 '63.
(MIRA 16:1)

(Polynesia—Discovery and exploration)

KEIBS, L.

PHASE I BOOK EXPLOITATION POL/5981

Symposium on Electroacoustic Transducers. Krynica, 1958

Proceedings of the Symposium on Electroacoustic Transducers [held in] Krynica, 17-26 September, 1958. Warsaw, Panstwowe Wydawnictwo Naukowe, 1961. 442 p. Errata slip inserted. 630 copies printed.

Sponsoring Agency: Polish Academy of Sciences. Institute of Basic Technical Problems.

Ed. in Chief: Janusz Kacprowski, Doctor of Sciences; Editing Committee: Ignacy Malecki, Professor, Doctor of Sciences; Wincenty Pajewski, Doctor; and Jerzy Wehr, Master of Sciences; Secretary: Juliusz Mierzejewski.

PURPOSE: This book is intended for physicists and acoustical engineers.

COVERAGE: The book is a collection of detailed research papers constituting the proceedings of a conference held in Krynica from 17 to 26 September 1958 under the auspices of the Institute of Technical Problems, Polish Academy of Sciences.

Card 1/8

35

Symposium on Electroacoustic Transducers POL/5981

The following basic problems are treated: 1) theoretical research on energy transformation processes; 2) experimental development of new types of transducers; 3) electroacoustic measurements; 4) technology of piezoelectric and magnetostrictive materials; 5) construction of transducers for technical needs; and 6) design of acoustical transducer systems. No personalities are mentioned. References (if any) follow the individual articles.

TABLE OF CONTENTS:

Card 2/8

Symposium on Electroacoustic Transducers POL/5981

Card 6/8

KEIETI, J.

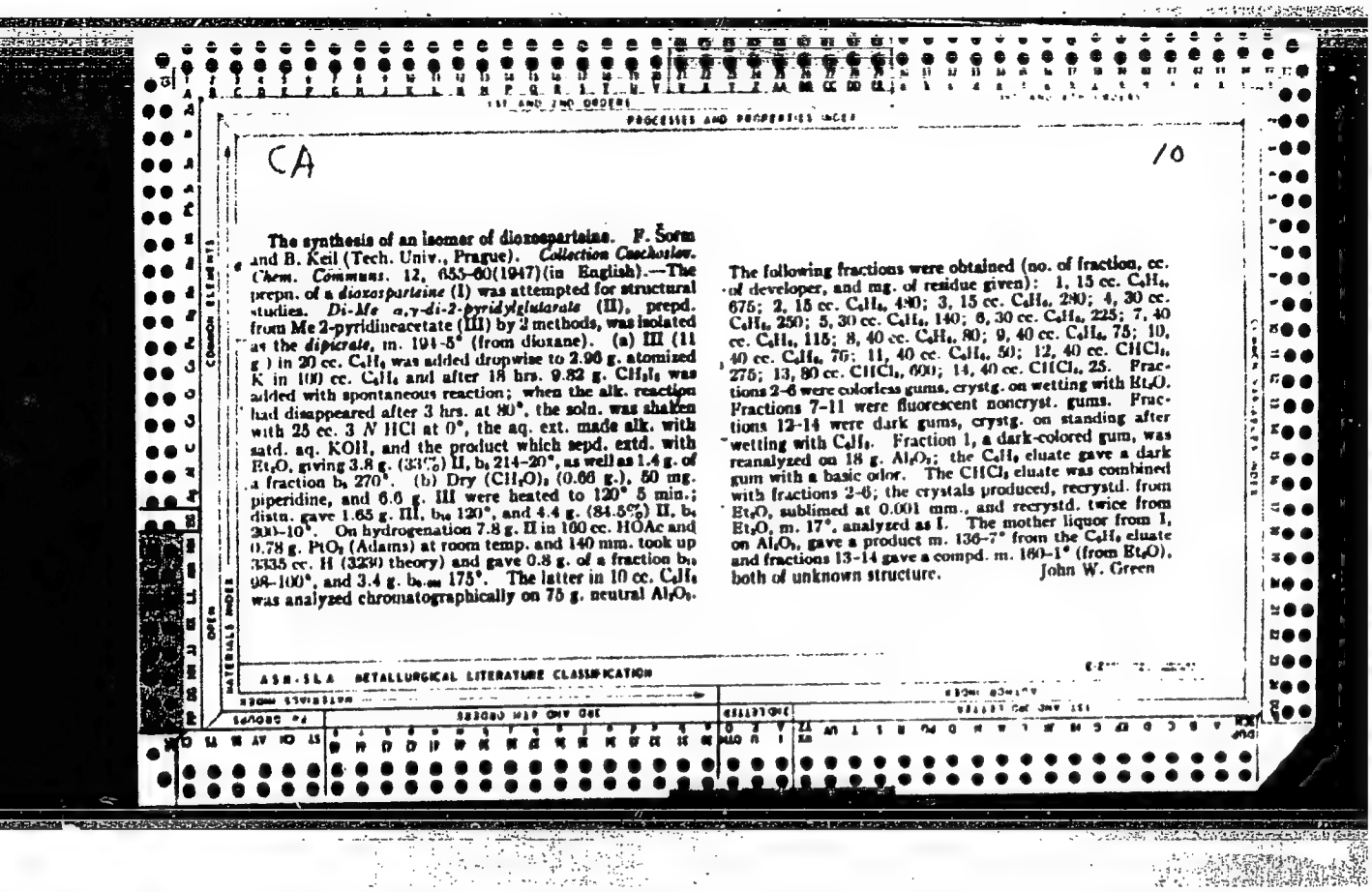
Study of the biological properties of some species of bacteria of the family Enterobacteriaceae. Cesk. farm. 13 no.3:110-114 Mr'64.

1. Katedra biochemie a mikrobiologie farmaceutickej fakulty UK, Bratislava.

7

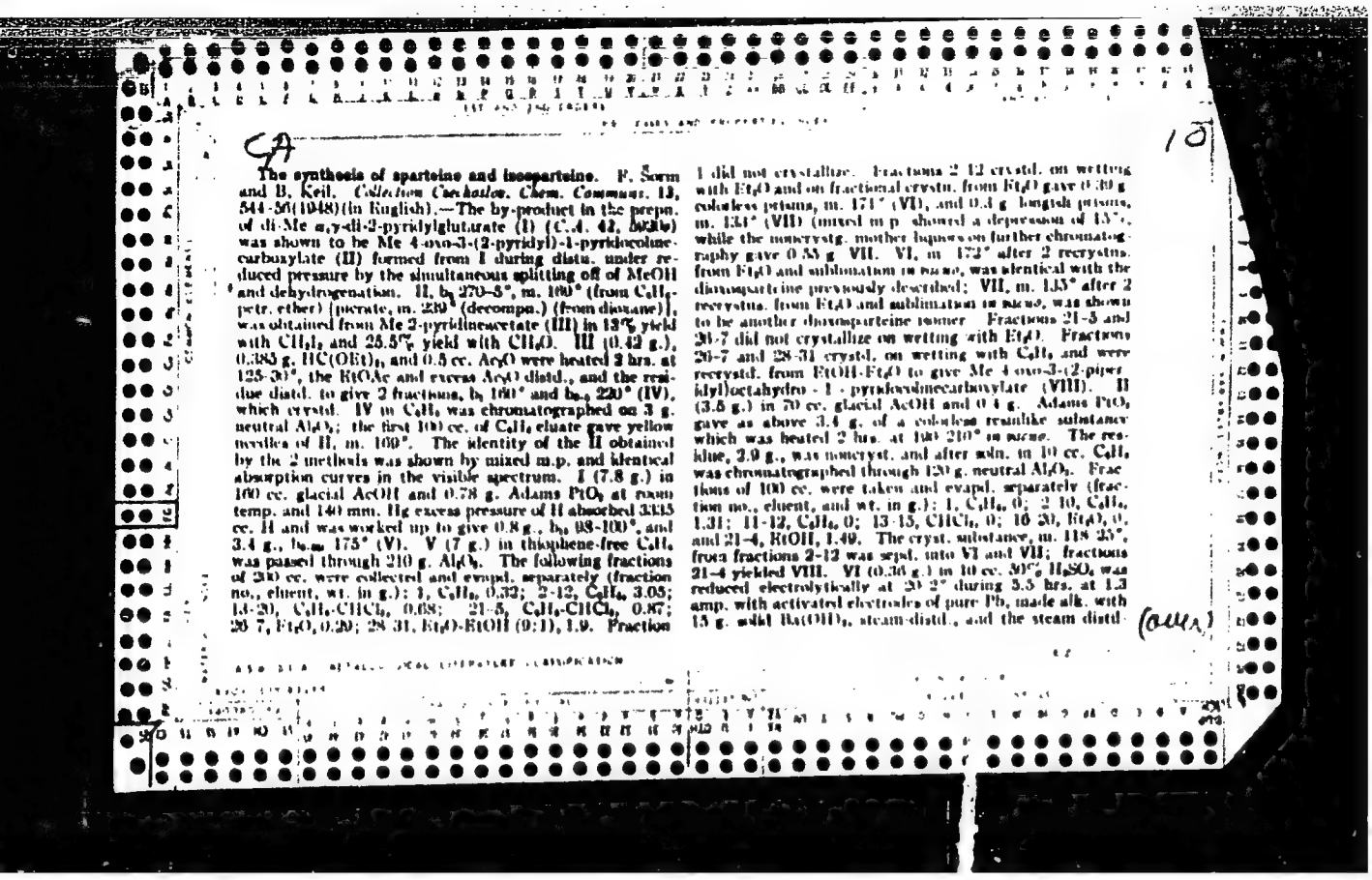
The creep performance of a few soft solders. A. Keil. 4E2C-1
Metall **11**, 730-2(1957).—Nearly all Bi alloys and soft solders show a greater hardness in the cast condition on both short time and long time hardness tests. In all cases the hardness falls rapidly with time of loading. This creep behavior in the case of pure Sn can be improved by the alloying of Ag and Sb. This is also true for Ag addns. to Cd-Zn alloys. The use of such materials for soldering, therefore, has advantages in technology. The advantage of Ag addn. to Pb-Sn solders is not demonstrable; this element is added, therefore, only if other reasons exist for its presence in the alloy.
H. Stoerts

MT



CA 10

The synthesis of an isomer of dioxospartеine. F. Šorm and B. Keil (Tech. Univ., Prague). *Collection Czechoslov. Chem. Communs.* 12, 655-60(1947)(in English).—The prepn. of a *dioxospartеine* (I) was attempted for structural studies. *Di-Me α,γ-di-2-pyridylglutarate* (II), prepd. from Me 2-pyridineacetate (III) by 3 methods, was isolated as the *dipicrate*, m. 194-5° (from dioxane). (a) III (11 g.) in 20 cc. C_6H_6 was added dropwise to 2.90 g. atomized K in 100 cc. C_6H_6 and after 18 hrs. 9.82 g. CH_3I was added with spontaneous reaction; when the alk. reaction had disappeared after 3 hrs. at 80°, the soln. was shaken with 25 cc. 3 *N* HCl at 0°, the aq. ext. made alk. with satd. aq. KOH, and the product which sepd. extd. with Et_2O, giving 3.8 g. (33%) II, b_5 214-20°, as well as 1.4 g. of a fraction b_5 270°. (b) Dry $(CH_2O)_3$ (0.66 g.), 50 mg. piperidine, and 6.6 g. III were heated to 120° 5 min.; distn. gave 1.65 g. III, b_{16} 120°, and 4.4 g. (84.5%) II, b_5 200-10°. On hydrogenation 7.8 g. II in 100 cc. HOAc and 0.78 g. PtO_2 (Adams) at room temp. and 140 mm. took up 3335 cc. H (3230 theory) and gave 0.8 g. of a fraction b_{15} 98-100°, and 3.4 g. $b_{0.05}$ 175°. The latter in 10 cc. C_6H_6 was analyzed chromatographically on 75 g. neutral Al_2O_3. The following fractions were obtained (no. of fraction, cc. of developer, and mg. of residue given): 1, 15 cc. C_6H_6, 675; 2, 15 cc. C_6H_6, 480; 3, 15 cc. C_6H_6, 280; 4, 30 cc. C_6H_6, 250; 5, 30 cc. C_6H_6, 140; 6, 30 cc. C_6H_6, 225; 7, 40 cc. C_6H_6, 115; 8, 40 cc. C_6H_6, 80; 9, 40 cc. C_6H_6, 75; 10, 40 cc. C_6H_6, 75; 11, 40 cc. C_6H_6, 50; 12, 40 cc. $CHCl_3$, 275; 13, 80 cc. $CHCl_3$, 600; 14, 40 cc. $CHCl_3$, 25. Fractions 2-6 were colorless gums, crystg. on wetting with Et_2O. Fractions 7-11 were fluorescent noncryst. gums. Fractions 12-14 were dark gums, crystg. on standing after wetting with C_6H_6. Fraction 1, a dark-colored gum, was reanalyzed on 18 g. Al_2O_3; the C_6H_6 eluate gave a dark gum with a basic odor. The $CHCl_3$ eluate was combined with fractions 2-6; the crystals produced, recrystd. from Et_2O, sublimed at 0.001 mm., and recrystd. twice from Et_2O, m. 17°, analyzed as I. The mother liquor from I, on Al_2O_3, gave a product m. 136-7° from the C_6H_6 eluate and fractions 13-14 gave a compd. m. 160-1° (from Et_2O), both of unknown structure. John W. Green



CA

10

The synthesis of sparteine and isosparteine. F. Sorm and B. Keil. *Collection Czechoslov. Chem. Communs.* 13, 544-56(1948)(In English).—The by-product in the prepn. of di-Me α,γ-di-2-pyridylglutarate (I) (*C.A.* 42, 5634b) was shown to be Me 4-oxo-3-(2-pyridyl)-1-pyridocolinecarboxylate (II) formed from I during distn. under reduced pressure by the simultaneous splitting off of MeOH and dehydrogenation. II, b_5 270–5°, m. 100° (from C_6H_{14}, petr. ether) [perrate, m. 239° (decompn.) (from dioxane)], was obtained from Me 2-pyridineacetate (III) in 13% yield with CH_2I_2 and 25.5% yield with CH_2O. III (0.42 g.), 0.383 g. $HC(OEt)_3$ and 0.5 cc. Ac_2O were heated 2 hrs. at 125–30°, the EtOAc and excess Ac_2O distd., and the residue distd. to give 2 fractions, b_5 160° and $b_{0.4}$ 220° (IV), which crystd. IV in C_6H_6 was chromatographed on 3 g. neutral Al_2O_3; the first 100 cc. of C_6H_6 eluate gave yellow needles of II, m. 100°. The identity of the II obtained by the 2 methods was shown by mixed m.p. and identical absorption curves in the visible spectrum. I (7.8 g.) in 100 cc. glacial AcOH and 0.78 g. Adams PtO_2 at room temp. and 140 mm. Hg excess pressure of H absorbed 3335 cc. H and was worked up to give 0.8 g., $b_{0.5}$ 98–100°, and 3.4 g., $b_{0.05}$ 175° (V). V (7 g.) in thiophene-free C_6H_6 was passed through 210 g. Al_2O_3. The following fractions of 200 cc. were collected and evapd. separately (fraction no., eluent, wt. in g.): 1, C_6H_6, 0.32; 2–12, C_6H_6, 3.05; 13–20, C_6H_6-$CHCl_3$, 0.68; 21–5, C_6H_6-$CHCl_3$, 0.87; 26–7, Et_2O, 0.20; 28–31, Et_2O-EtOH (9:1), 1.9. Fraction 1 did not crystallize. Fractions 2–12 crystd. on wetting with Et_2O and on fractional crystn. from Et_2O gave 0.39 g. colorless prisms, m. 171° (VI), and 0.4 g. longish prisms, m. 134° (VII) (mixed m.p. showed a depression of 15°, while the noncrystg. mother liquors on further chromatography gave 0.55 g. VII. VI, m. 172° after 2 recrystns. from Et_2O and sublimation *in vacuo*, was identical with the dimorpholine previously described; VII, m. 135° after 2 recrystns. from Et_2O and sublimation *in vacuo*, was shown to be another dimorpholine isomer. Fractions 21–5 and 26–7 did not crystallize on wetting with Et_2O. Fractions 26–7 and 28–31 crystd. on wetting with C_6H_6 and were recrystd. from EtOH-Et_2O to give Me 4-oxo-3-(2-piperidyl)octahydro-1-pyridocolinecarboxylate (VIII). II (3.8 g.) in 70 cc. glacial AcOH and 0.4 g. Adams PtO_2 gave as above 3.4 g. of a colorless resinlike substance which was heated 2 hrs. at 180–210° *in vacuo*. The residue, 2.9 g., was noncryst. and after soln. in 10 cc. C_6H_6 was chromatographed through 120 g. neutral Al_2O_3. Fractions of 100 cc. were taken and evapd. separately (fraction no., eluent, and wt. in g.): 1, C_6H_6, 0; 2–10, C_6H_6, 1.31; 11–12, C_6H_6, 0; 13–15, $CHCl_3$, 0; 16–20, Et_2O, 0, and 21–4, EtOH, 1.49. The cryst. substance, m. 118–25°, from fractions 2–12 was sepd. into VI and VII; fractions 21–4 yielded VIII. VI (0.36 g.) in 10 cc. 30% H_2SO_4 was reduced electrolytically at 20–2° during 5.5 hrs. at 1.3 amp. with activated electrodes of pure Pb, made alk. with 15 g. solid $Ba(OH)_2$, steam-distd., and the steam distd.

(over)

late made neutral to methyl orange and tak . to dryness to give 0.24 g. HCl salt (IX). IX (0.24 g.) n 2 cc. hot H_2O was added dropwise to 0.51 g. Na pic e in 10 cc. H_2O, and the crude picrate which sepd. was d with abs. alc. and recrystd. from alc.-dioxane to give 44 g. of the picrate, m. 222° (decompn.), presumably th dipicrate of

sparteine (X). VII on similar treatment g e 2 picrates, m. 187–9° (from alc.-dioxane) (XI) and m. 2 ° (from alc.-dioxane) (XII), which were sepd. mechanic ly. XI may be the dipicrate of a isosparteine while XII appeared to be

similar to X (cf. *C.A.* **28**, 4064[1]; **35**, 3031[1] By examn. of the structure of sparteine, if rings B and C are cis to each other, rings A and D can be attached to rin B or C, resp., either cis or trans. Thus, 3 isomerides n exist: (1) A:B cis, C:D cis; (2) A:B cis, C:D trans and (3) A:B trans, C:D trans. Each of these isomerides will be re olvable into optical antipodes.

H. L. Yale

CA

4

Electrophoresis of proteins in agar jelly. A. H. Gordon, B. Keil, and K. Sebesta (Tech. Univ., Prague, Czech.). *Nature* 164, 488-9(1949).--Ferritin and hemoglobin were sepd. by electrophoresis in 1% agar jelly in 19 hrs. at 3.3 v./cm. Difco 1:10,000 pepsin at pH 3 in NaOAc buffer sepd. into 2 main bands which was revealed by spraying with Pauli reagent (I) (Comden, *et al.*, C.A. 40, 4100^{9}). The adsorption at 280 mμ corresponded to the color developed with I. Sepns. of the proteins of egg white at pH 6.8 and 8.0 were similar to those obtained by the Tiselius technique. Earl S. McColley

A

C

Electrophoresis of proteins in agar jelly. A. H. Gordon, H. Keil, K. Šebesta, O. Kneslová, and P. Šorm (Tech. Univ., Prague). *Collection Czechoslov. Chem. Communs.* 15, 1-10(1950)(in English); cf. *C.A.* 44, 1814*d*. An app. and methods for the electrophoretic sepn. of proteins in agar jelly (I) are described in detail (cf. *C.A.* 40, 4100*f*). The sepd. protein bands are detected either by their ultraviolet absorption at 280 or 200 mμ or by "printing off" the I on the filter paper and detecting with Pauly reagent or ninhydrin. Protein mobility at different agar concns. depends on the mol. wt. Whereas hemoglobin moves with the same speed, ferritin is slowed down considerably by higher I concns. Electrophoresis of egg white and normal human plasma resulted in sepn. of compds. similar to the sepn. obtained with the Tiselius method. Crude pepsin was sepd. into different fractions. A drawback of the method is the difficulty of removing the last traces of I from amino acids and proteins. The chief use for the method will be the sepn. of proteins on a preparative scale. K. Schoen

CA

11 H

Proteins and amino acids. IV. Partition chromatography of dinitrophenyl amino acids on kieselguhr and siliconated materials. O. Kucsl, B. Keil, A. Malý, and P. Sorm (Tech. Univ., Prague). *Collection Czechoslov. Chem. Communs.* 15, 918-28(1950)(in English); cf. *C.A.* 45, 9182c; 46, 3587d. The substitution of kieselguhr for silica gel in the method of Sanger (*C.A.* 40, 6551), gives a more reproducible system. If the kieselguhr is silicone coated or a silicone polymer is used, a "reversed-phase" chromatography ensues. The rate of movement, *R*, as a function of pH was evaluated as the ratio of *R* for a reference substance to *R* for the dinitrophenyl amino acid. The pH is so selected that optimum sepn. is obtained for any given mixt. The dinitrophenyl derivs. of threonine, glycine, alanine, and phenylalanine and dinitroaniline were used as examples with a mobile phase of $CHCl_3$-EtOAc.

B. P. Block

CA

Proteins and amino acids. V. The preparation of apoferritin by alcohol precipitation. B. Keil and J. Potůčková (Central Chem. Research Inst., Prague). *Collection Czechoslov. Chem. Communs.* 16, 204–6(1951)(in English); cf. *C.A.* 46, 8622*f*.—Prepn. of ferritin (I) by Laufberger's procedure (*C.A.* 32, 2983[1]) gave within 8–9 hrs. cryst. material which yielded pure I after a single further crystn. Cryst. I was dissolved in an acetate buffer (pH 4.52) and freed from Cd by dialysis against the same buffer. The resulting clear dark-brown soln. contained 0.67 mg. N and 1.44 mg. Fe/ml. This soln. (21 ml.) was treated with 200 mg. $Na_2S_2O_4$ (II) and 100 mg. phenanthroline (II_2), let stand at 1° overnight, a further 100 mg. II and 220 mg. III added, the soln. let stand 1 hr., cooled to −5° while 29 ml. EtOH was added gradually from a separatory funnel with the stem of a capillary and dipping below the liquid surface; the soln. was centrifuged 4 min. at −5° at 9000 r.p.m., the liquid decanted, the sediment dissolved in the acetate buffer, made up to 14 ml., and 200 mg. II and 100 mg. III added; after 1 hr. a 2nd pptn. was carried out at −5° by addn. of 13.2 ml. EtOH, the centrifuged sediment dissolved in buffer soln., and the apoferritin (IV) soln. dialyzed. Faintly pink soln. of IV (50 mg.) contained 0.05% Fe and 15.0% N. The protein crystd. spontaneously on addn. of 1/5 vol. 20% $CdSO_4$ soln. to the dialyzed soln. VIII. **A new synthesis of glutathione.** J. Rudinger and F. Sorm. *Ibid.* 214–19; cf. *C.A.* 46, 3567*d*.—Into *S*-benzyl-L-cysteine (I) (14 g.) suspended in 350 cc. abs. dioxane in a 1-l. flask fitted with a liquid-sealed stirrer, reflux condenser with guard tube, and a gas-delivery tube to the bottom, and heated to 40°, $COCl_2$ was introduced at 40–5° until the I dissolved, then 2 hrs. more. The excess $COCl_2$ was removed with dry air, the dioxane distd. off at 30–40° and 15 mm. after filtering, and the residue taken up with boiling dry C_6H_6; on cooling there separated 10.5 g. *S*-benzyl-*N*-carboxy-L-cysteine anhydride (II), m. 105–6°; mother liquor treated with ligroine gave 1.7 g. more; total yield 77.5%), m. 105–6°, $[\alpha]_D^{20}$ −43 ± 1.5° (*c* 1.94, dioxane). To 2.75 g. II in 20 cc. tetrahydrofuran (III), cooled to −75°, was added dropwise a precooled soln. of 1.98 g. $H_2NCH_2CO_2H$ and 0.94 g. 1-methylpiperidine in

Proteins. A lecture. Bořivoj Keil. *Chem. Zvesti* 6, 483–7(1952).—
Jan Micka

Bořivoj Keil

Proteins and amino acids. XIII. Use of dinitrobenzenesulfonyl chloride in the determination of end amino acids of peptide chains. Bořivoj Keil, Věra Knerslová, and František Šorm. *Chem. Listy* 46, 167-70(1952).—The journal reference in *C.A.* 48, 3504c should have been *Chem. Listy* 46, 167-70(1952) instead of *Ibid.* 167-70. B. J C

KEIL, B.

Biological & Biochemistry
Method - 11

Proteins and amino acids. XII. Quantitative estimation of dinitrophenylated proteins. Bedřich Keil, Vladimír Tomášek, and Jana Sedláčková (Central Chem. Inst., Prague, Czech.). *Chem. Listy* **46**, 437-61(1952); cf. C.A. **46**, 6972h. A method for the detn. of the basic end groups in proteins has been worked out on the basis of the formation of dinitrophenyl derivs. and their analysis by means of countercurrent distribution and paper chromatography. The method was applied to the detn. of 1 mol. of aspartic acid in beef serum albumin. The analysis was carried out in the dark since the dinitrophenyl derivs. of amino acids are not stable toward the daylight. M. Hudlický

KEIL, B.

Proteins. XXIX Oxidation of pancreatic proteases. p. 1837

Vol. 48, no. 12, Dec. 1954
CHEMICKE LISTY
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5, No. 4, 1956

KEIL, B.

Proteins. XXIX. Oxidation of pancreatic proteases. In Russian. p. 471.

Vol. 20, no. 2, April 1955
SBORNIK CHEKHOSLOVATSKIKH KHIMICHESKIKH RABOT
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5, No. 4, April 1956

KEIL, B.

General - II

Proteins and amino acids. XIII. Activation of chymotrypsinogen to chymotrypsin. Frantisek Šorm, Bohuvěl Keil, and Ivan Rychlík (Central Chem. Inst., Prague, Czech.). *Chem. Listy* 46, 401-4(1952); cf. *C.A.* 46, 11259*i*.—On the basis of quant. paper chromatography of dinitrophenyl derivs. of amino acids, *chymotrypsinogen* (I) was found to contain no basic end group. Activation is followed by the formation of 2 amino groups (based on the mol. wt. 22,400). In addn., a mixt. of tri- to octapeptides is formed as a result of hydrolytic processes. Cryst. α-chymotrypsin consists of 2 or 3 proteins having the same proteolytic activity. During the crystn., the content of a form contg. 1 mole of alanine and 1 mole of phenylalanine as end amino acids increases. Proteins with aspartic acid, serine, and threonine as end amino acids accumulate in the mother liquors. Activation of I is based probably on the cleavage of cyclic peptidic chains which reveals the center of activity. **XIV. Enzymic activity of dinitro derivatives of α-chymotrypsin.** Frantisek Šorm and Ivan Rychlík. *Ibid.* 405-8.—By the action of 1,2,4-$C_6H_3F(NO_2)_2$ 150 mg. on lyophilized chymotrypsin (I) (300 mg. in a soln. contg. 300 mg. $NaHCO_3$ in 15 ml. H_2O), dinitrophenyl derivs. contg. 2, 4, and 7 dinitrophenyl groups per mol. of I, resp., were prepd., purified by dialysis and analyzed by spectrophotometry. Protease and chymotrypsin activities drop with increasing rate of substitution, esterase activity of I contg. 2 dinitrophenyl groups is higher, that contg. 4 groups about the same, and that contg. 7 dinitrophenyl groups per mol. of I lower than that of I. Michaelis const. and max. reaction rate of I pure and I contg. 2, 4, and 7 dinitrophenyl groups, resp., are: 0.013, 0.0002, 0.0020, and 0.0018; 0.50, 0.40, 0.30, and 0.12. Tendency of synthesizing polypeptides of methionine from its Pr ester increases with increasing amt. of dinitrophenyl groups. **XVI. Interaction of proteins with electrolytes.** Vladimír Kačena and Luboš Matoušek. *Ibid.* 525-8; cf. *C.A.* 46, 11315*g*.—A dynamic equil. exists in a system protein-metal ions in which protein (serum albumin) represents a complexing agent of low diffusion const. This accounts for the fact that a wave showing the reduction of ions forming a complex with serum albumin is, at a certain pH, higher than that corresponding to the flow of ions in the complex.

M. Hudlický

Surt, J. (2)

(after crystn. from C_6H_6-petr. ether, m. 85°. V (5 g.) refluxed 4 hrs. with 15 ml. 40% aq. HBr, then evapd., and the residue (6.2 g.) dissolved in 40 ml. MeOH and 4 ml. C_5H_5N yielded 1.7 g. (55%) IV, m. 165° (from H_2O). VI (30 g.) and 22.5 g. MeCH:CHCO$_2$Et refluxed 15 hrs. with 0.1 g. Na in 20 ml. EtOH, the mixt. acidified, extd. with three 50-ml. portions of ether, and the exts. evapd. yielded 29.5 g. (60%) of VII, b. 122-3°. The Schmidt reaction carried out in the same way as for V gave 17 g. of an oil which was directly hydrolyzed with dil. H_2SO_4 (5 ml. concd. H_2SO_4 in 15 ml. H_2O for [illegible] of the oil) by refluxing 5 hrs.; after the removal of [illegible] and SO_4 ions the residue was evapd. to dryness and dissolved in 10 ml. H_2O and 10 ml. EtOH to yield 2 g. IX, m. 151°, (after crystn. from H_2O, m. 152° [illegible]). The Schmidt reaction with 30 ml. H_2SO_4, 200 ml. $CHCl_3$, 21 g. VIII, and [illegible] ml. [illegible]% HN_3 gave an [illegible], which, after hydrolysis with dil. H_2SO_4 and removal of the ions yielded 1.2 g. X, m. 155-8° (from H_2O). XIII. Use of azobenzenesulfonyl chloride in determination of end amino acids of peptide chains. [illegible] (Central Chem. [illegible] 167 70. — p-PhN:NC$_6$H$_4$SO$_2$Cl (I) was found to be a suitable reagent for detg. the end amino acids in peptides. The amino acid (or peptide) was treated with I in [illegible] and an equiv. amt. of $NaHCO_3$ [illegible] at room temp., the [illegible] and [illegible], and the residue was dissolved in H_2O, extd. with [illegible] to remove unreacted I, and acidified. The [illegible] (m. given) of the following [illegible] were prepd.: [illegible] 5°, [illegible] 145°, [illegible], DL-serine 212°, [illegible], DL-phenylalanine [illegible], L-arginine 172°, DL-histidine ([illegible] salt) [illegible], L-tyrosine 165°, [illegible] 171°, [illegible] glutamyl-L-tyrosine [illegible]. Acid hydrolysis (heating 5 hrs. at 110° with [illegible] HCl) liberated amino acids from the [illegible]; alk. hydrolysis (4 hrs. at 100° with [illegible]) split only peptidic bonds, so that the end amino acid could be identified from

Proteins and aminoacids. XII. Synthesis of C-methyl-glutamic acids. Jiří Šmrt and František Sorm (Central Chem. Inst., Prague, Czech.). *Collection Czechoslov. Chem. Communs.* 18, 131-9(1953)(English summary); cf. *C.A.* 47, 12159*a*.—After the failure of the Curtius degradation of ester azide of (cyanoethyl)malonic acid, the Schmidt reaction was used for prepg. all three C-methylglutamic acids. $AcCHMeCO_2Et$ I with $CH_2{:}CHCN$ (II) gave $EtO_2CCMe(AcCH_2CH_2CN)$ (III) which was transformed directly to *α-methylglutamic a.* (IV). IV was also obtained by hydrolysis of $O_2CCMe(NHAc)CH_2CH_2CO_2Et$ (V) resulting from the action of NaH on $EtO_2CAcMeCCH_2CH_2CO_2Et$. $AcCH_2CO_2Et$ (VI) and $MeCH{:}CHCO_2Et$ gave $EtO_2CCHAcCHMeCH_2CO_2Et$ (VII). VI and $CH_2{:}CMeCO_2Me$ gave $EtO_2CCHAcCH_2CHMeCO_2Me$ (VIII). VII and VIII were transformed to *β-* (IX) and *γ-methylglutamic* (X) acids resp., by the Schmidt reaction. $MeCH(CO_2Et)_2$ (17.4 g.), 15 ml. dioxane and 2 ml. Raney's catalyst treated with 10.6 g. H at 30–40° with cooling, the mixt. acidified with HCl (1:3) after 3 hrs., treated with 25 ml. $(ClCH_2)_2$ and 25 ml. H_2O, and the org. layer evapd. *in vacuo* to yield 95% $(NCCH_2CH_2CMe(CO_2Et)_2$, $b_{0.4}$ 110°, d_4^{20} 1.0092, n_D^{20} 1.4229. I (28.8 g.), 10 ml. dioxane, 0.5 g. Na, and 20 ml. EtOH was added, in the course of 1 hr., 21.2 g. H at 35° and the product isolated as above yielding 21 g. (61%) of III, $b_{0.4}$ 116°, d_4^{20} 1.0608, n_D^{20} 1.4468. III (10.7 g.) in 120 ml. of 4.7% NaH soln. was added to a stirred mixt. of 30 ml. concd. H_2SO_4 in 250 ml. $CHCl_3$ at 20–50°, the cooled reaction mixt. dild. with 120 ml. H_2O, the aq. layer extd. with 25 ml. $CHCl_3$, refluxed 10 min., dild. with distd. H_2O to 500 ml., mixed with 215 g. $Ba(OH)_2$ in 500 ml. hot H_2O, boiled 30 min., the $BaSO_4$ was filtered off, washed with 800 ml. hot H_2O contg. 5 ml. H_2SO_4, the Ba and SO_4 ions removed, and the filtrate evapd. *in vacuo* to 100 ml., treated with 100 ml. EtOH and allowed to cryst. in an ice box to yield 8.8 g. (55%) of IV, m. 169° (from H_2O). To 17 g. of $EtO_2CCAcMeCH_2CH_2CO_2Et$ in 100 ml. $CHCl_3$ and 34 ml. concd. H_2SO_4 was added 7 g. HN_3 portion-wise with cooling at 30–35°, the mixt. poured onto 200 g. ice, and the $CHCl_3$ layer extd. with 100 ml. H_2O, dried, and evapd., leaving 14.2 g. (79%) V, m. 64–8°,

(illegible)

KEIL, B.; TOMASEK, V.; SEDLACKOVA, J.

On albumins and aminoacids. Part 14. Quantitative analysis of dinitrophenylized albumins [with summary in German]. Sbor.Chekh.khim.rab. 18 no.2:275-284 Ap '53. (MLRA 7:6)

1. Institut organicheskoy khimii Chekhoslovatskoy Akademii nauk, otdeleniye organicheskoy biokhimii, Praga. (Dinitrophenyl) (Albumin)

SORM, F.; KEIL, B.; RYCHLIK, I.

On albumins and aminoacids. Part 15. Activation of chymotrypsinogen to chymotrypsin [with summary in German]. Sbor.Chekh.khim.rab. 18 no.2: 285-293 Ap '53. (MLRA 7:6)

1. Institut organicheskoy khimii Chekhoslovatskoy Akademii nauk, otdeleniye organicheskoy biokhimii, Praga. (Chymotrypsin)

KEIL, B.; SORM, F.

On proteins. Part 19. Methylation of chymotrypsogen and chymotrypsin [with summary in English]. Sbor.Chekh.khim.rab. 18 no.4:550-559 Ag '53. (MLRA 7:6)

1. Department of Organic Biochemistry, Central Chemical Research Institute, Prague. (Chymotrypsin) (Methylation)

KEIL F.

Proteins. XIX. Methylation of chymotripsinogen and chrymotrypsin. p.245
(Chemicke Listy. Vol. 47, No 2, Feb. 1953) Czedhoslovakia

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress, August 1953, Incl.

Keil, B.

1

Herout, V., Keil, B., Protiva, M., Hudlicky, M., Ernest, I., and Gut, J.: Laboratorní technika organické chemie. Prague: Nakl. CSAV. 1954. 756 pp. Kčs 80. Reviewed in *Chem. Listy* 49, 1415(1955).

Chem) + Educ

Herout, V., Keil, B., Protiva, M., Hudlicky, M., Ernest, I., and Gut, J.: Organic Chemistry Laboratory Techniques. Publishing House CSAV. 1954. 756pp. Kcs. 86. Reviewed in Chem. Listy 49, 1415(1955).

LAUCIKOVA, O.; JAKUBOVIC, A.; KNIL, B.; SORM, F.

Viruses I; isolation and chemical properties of Rous sarcoma.
Chekh. biol. 3 no.5:298-307 Nov 54.

1. Institut organicheskoy khimii ChSAN, organicheskaya biokhimiya, Praga.

(VIRUSES,
Rous sarcoma virus, isolation & chem.)
(NEOPLASMS, experimental,
Rous sarcoma virus, isolation & chem.)
(SARCOMA, experimental,
Rous sarcoma virus, isolation & chem.)

KEIL, B.

MELOUN, B.; KEIL, B.; SORM, F.

Amino acids and peptides. Part 9. Constitution of the peptide phalloidine; part 2 [in German with summary in Russian]. Sbor.Chekh.khim.rab. 19 no.1:153-161 F '54. (MLRA 7:6)

1. Otdeleniye organicheskoy biokhimii, Institut organicheskoy khimii Chekhoslovatskoy Akademii nauk, Praga. (Phalloidine)

; ČERNÝ, F.; KNESSLOVÁ, V.

(Collection of Czechoslovak Chemical Communication. Praha. Vol. 19, no. 4, Aug. 1954)

/East

KEIL, B.

2

4956* Proteins. O belkakh. XXV. Chemical Structure of Proteins. Introduction. O khimicheskom stroenii belkov. Vvedenie. F. Sborn. XXVI. Photometric Analysis of Protein Hydrolysates. Fotometricheskii analiz belkovykh gidrolizatov. (Russian.) B. Keil'. *Collection of Czechoslovak Chemical Communications*, 5, Oct. 1954, p. 1003-1017.

Analysis of individual peptides or peptide fractions as an approach to the problem. Tables, graphs. 29 ref

[illegible]

[illegible]

[illegible]. XVI. [illegible] 6. (Collection of Czechoslovak Chemical Communication. Praha. Vol. 19, no. 5, Oct. 1954)

[illegible]/East

[illegible]

KUTA, Z.

[illegible] ; SORM, F.

[illegible] XXVII. Comparative study of the [illegible] (Collection of Czechoslovak East Chemical Communication. Praha. Vol. 19, no. 5, Oct. 1954)

SO: [illegible] (USAF), [illegible]

KREJ[illegible]
KEL, Bořivoj

Proteins XXVI Photometr[illegible]
drolyzates Bořivoj Keil [illegible]

Chem [illegible]
quant[illegible]
ter[illegible]
negative [illegible]
flected light [illegible]
rate is [illegible]
egati[illegible]
albumin [illegible]
sinogen, and [illegible]
examples. M. Hudlický

KEIL, B.

"Proteins. XXVII. Comparative study of acidic peptide fractions from partial hydrolyzates of chymotrypsin and trypsin." Ceskosloveska Morfologie, Praha, Vol. 48, No. 5, May 1954, p. 735.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.

KEIL, BOŘIVOJ
CZECH

Proteins. XXVIII. Comparison of the arginine peptides from partial hydrolyzates of chymotrypsinogen and trypsinogen. Jiří Vaněček, Bořivoj Keil, and Miroslav Sorm (Československá akad. věd, Prague, Czech.). Chem. listy 48, 1077–1080(1954); cf. C.A. 48, 13747f.—Chymotrypsinogen (I), trypsinogen (II), and insulin (III) (in 200 cc. soln.) were partially hydrolyzed by heating 6 days at 37° with 10 ml. concd. HCl. The arginin peptides were sepd. by passing the hydrolyzates over a column filled with Amberlite IRA-400, and further investigated by means of total hydrolysis and the dinitrophenyl method. Both I and II contain the grouping seryl-arginyl and valyl-arginyl. I differs from II by contg. a third mol. of arginine bound to threonine and alanine. In III the main grouping of glycine and arginine corresponds to the Sanger formula but the grouping of arginine with leucine is in contradiction. XXIX. Oxidation of pancreatic proteases. Bořivoj Keil. *Ibid.* 1837–41.—Oxidation of I, II, and α- and γ-chymotrypsins with performic acid is accompanied by denaturation of the proteins and by splitting off small amts. of low-mol. peptides. Hydrolytic fission of peptide bonds during the reaction cannot be prevented. Biol. activity decreases rapidly with oxidation. Two main chains of chymotrypsin seem to be linked not only by disulfide bridges, but by stronger, probably peptide bonds. The oxidation was carried out by dissolving the protein (1 g.) in a mixt. of 40 ml. 90% HCO_2H and 4 ml. 26% H_2O_2, holding at room temp. 20 min., adding 40 ml. H_2O, and evapg. to dryness below 50° *in vacuo*. The residue was stirred with Me_2CO (60 ml.), the gummy mass centrifuged, washed twice with 60 ml. Me_2CO, stirred with 60 ml. 0.1*N* NH_4OH, after 2 hrs. the pH adjusted to 6 with 5*N* H_2SO_4, the ppt. 0.8 g. centrifuged, the filtrate acidified with 5*N* AcOH to pH 4, dried

5 Vaneesk

from frozen state, the residue dissolved in 8 ml. H_2O, treated with 6 ml. 50% $AcONH_4$, the ppt. of 20 mg. centrifuged, the soln. evapd., and $AcONH_4$ evapd. at 90° and 0.1 mm., leaving 60 mg. product (A), sol. in H_2O, mol. wt. approx. 3000. Ultraviolet absorption spectra show an absence of aromatic amino acids. Ultraviolet spectra of I, II, and fractions (A) of both proteins are given.

M. Hudlicky

2/2

KEIL, B

Proteins. XXIV. Substitution of ε-amino groups of lysine in the molecule of chymotrypsinogen by the reaction with dinitrofluorobenzene. Věra Kostálová, Bohuvěr Keil, and František Šorm (Ústav Org. Chem., ČSAV, Prague, Czech.). *Chem. Listy* 48, 599-601(1954); cf. *C.A.* 48 04785.—By carrying out the reaction of 2,4-dinitrofluorobenzene (I) with chymotrypsinogen in a soln. of $NaHCO_3$ and 1% Me_3N, under certain conditions all of the ε-amino groups in lysine reacted with I. The importance of pH in the reaction is stressed. M. Hudlický

KELL, B.

CZECH

The peptide accompanying pancreatic ribonucleic acid
B. Keil and M. Hrubešová (Česk. akad. věd, Prague).
Chem. Listy 49, 271-3(1955).—The peptide accompanying
pancreatic ribonuclease was found to give a slight mu-
[illegible] M. Hudlický

Proteins. XXXIII. Differences in the arginine peptides of some serum albumins. Věra Knessiová, Vladimír Kostka, Bořivoj Keil, and František Sorm (Czech. Akad. Věd, Prague). *Chem. Listy* 49, 913–20(1955); cf. *C.A.* 49, 10009h.—Human, beef, horse, duck, and sheep serum albumins were subjected to partial hydrolysis by heating 200-mg. portions of the proteins 144 hrs. at 37° with 10 ml. concd. HCl. From the partial hydrolyzates the arginine peptides were isolated by means of the ion exchanger Amberlite IR-A. Hydrolysis of the arginine peptides with equal vols. of concd. HCl (16 hrs. at 105° in a sealed tube), paper chromatography in BuOH-AcOH system, hydrolysis of individual fractions with 6*N* HCl (16 hrs. at 105°), paper chromatography in the BuOH-AcOH system, and dinitrophenyl analysis revealed considerable differences in the content of the individual amino acids in serum albumins of various origins, although the total hydrolyzates of all of the investigated serum albumins showed only slight differences.

M. Hudlický

MD 3

KEIL, BOHUSLAV

Virus studies. VII. A comparative study of two strains of the tobacco mosaic virus. Alexander Jakubovič, Libor Šlechta, Bořivoj Keil, and František Šorm (Czech. Akad. Věd, Prague). *Chem. Listy* 49, 1561–4(1955); cf. *C.A.* 49, 10410e.—Ultraviolet spectrum, electrophoretic mobility, and qual. and quant. content of amino acids are given for cryst. forms of the ordinary strain and Alke-strain of the tobacco mosaic virus. Only the Alke-strain was found to contain histidine. Electron-microscope photographs of both cryst. forms are given. M. Hudlický

KEIL, B.

Similarities in the structure of proteins [illegible]
Sorm (Czech. Acad. Sci. [illegible]
Enzymes [illegible]
in German [illegible]
origin and [illegible]
enzymatic [illegible]
[illegible]

[illegible]
[illegible]
[illegible]
...ally related species [illegible]
larities were related to [illegible]

Keil Bořivoj

Virus studies. VII. A comparative study of two strains of the tobacco mosaic virus. Alexander Jakubovič, Libor Šlechta, Bořivoj Keil, and František Šorm. *Collection Czechoslov. Chem. Communs.* 21, 29–32(1950)(in German).—See *C.A.* 50, 440e.

P. I. C.

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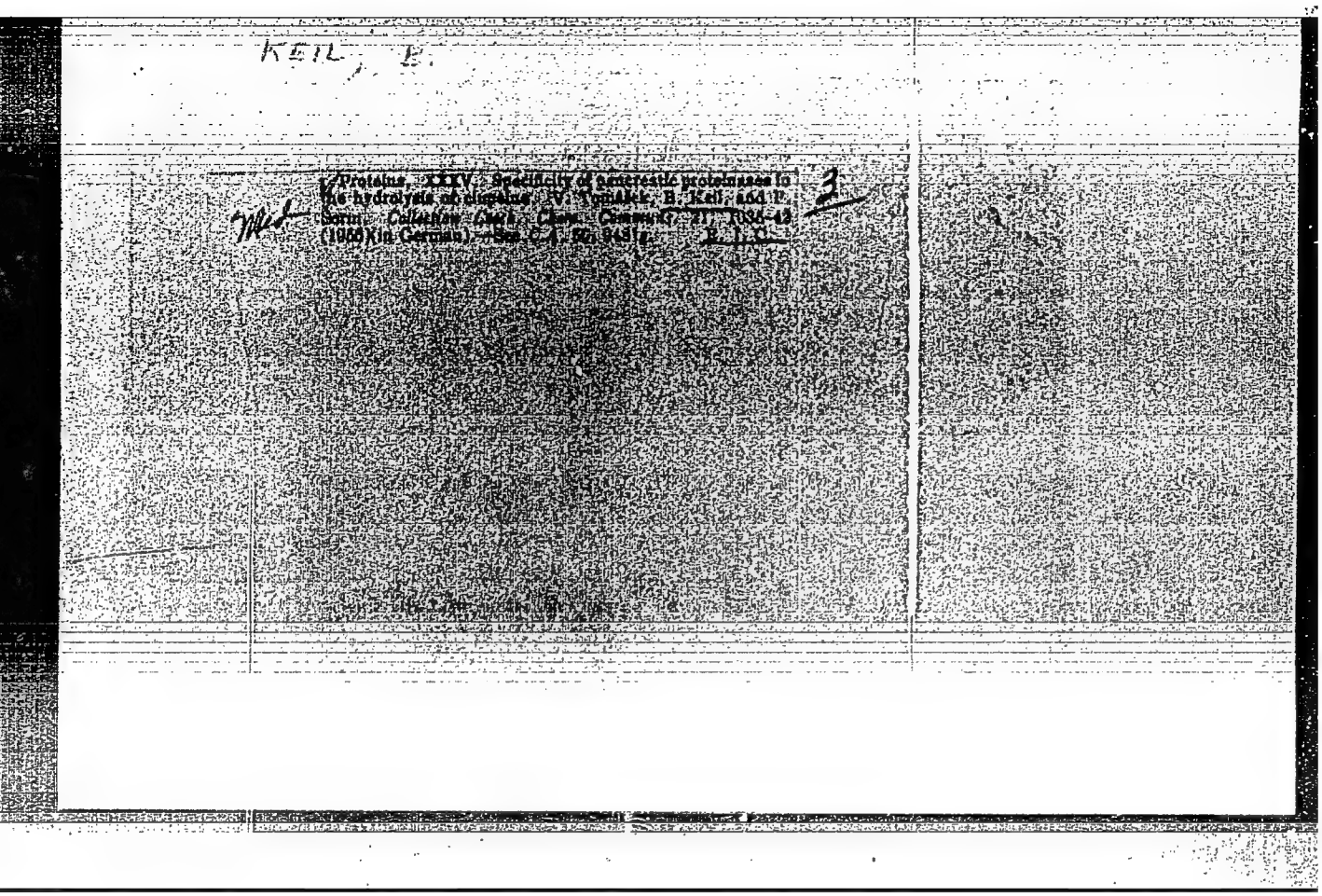
KLIL, B. Proteins. XXXV. Specificity of pancreatic proteinases in the fission of clupein. p. 623. Vol 50, no. 4, Apr. 1956. CESKE LISTY. Praha, Czechoslovakia.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4—April 1957



KEIL, B.

Proteins. XXXV. Specificity of pancreatic proteinases in the hydrolysis of peptides. IV. Tomášek, B. Keil, and F. Sorm. *Collection Czech. Chem. Commun.* 27, 1034-42 (1962) (in German). — See *C. A.* 56, 9431g. B. J. C.

3

KEYL', B.

International conference on protein. Vop. med. khim. 3 no.1:74-77 Ja-F '57 (MLRA 10:4)

1. Khimicheskiy institut Chekhoslovatskoy akademii nauk, Praga. (PROTEINS)

Keil, B.

CZ/8/52(82)/10-26/39

AUTHORS: Šorm, F., Keil, B., Holyšovský, V., Meloun, B., Kostka, V., and Vaníček, J.

TITLE: Proteins.XLIV. Comparison of the Microstructure of Chymotrypsinogen and Trypsinogen. Preliminary Communication (O bílkovinách.XLIV. Srovnání mikrostruktury chymotrypsinogenu a trypsinogenu. Předběžné sdělení)

PERIODICAL: Chemické Listy, 1958, Vol 52(82), Nr 10, pp 1992-1995 (Czechoslovakia)

ABSTRACT: This is a continuation of the discussion on the microstructure of proteins in which the authors draw on their own experimental results (previously published) and those of others. Attention is drawn to the repetition of certain peptide residues in the two proteins considered.
There are 5 tables and 34 references, 12 of which are Czech, 22 Western.

Card 1/2

ASSOCIATION: Biochemické oddělení, Chemický ústav, Československá akadmie věd, Praha (Biochemistry Division, Institute of Chemistry, Czechoslovak Academy of Science, Prague)

SUBMITTED: March 13, 1958

Card 2/2

KEIL, B.; SORM, F.; MARTAN, F.

Proteins and amino acids. XXXVIII. Comparison of arginine peptides of partial hyfrolysates of two hemoglobins. p. 352. (Chemicke Listy, Vol. 51, no. 2, Feb. 1957.)

SO: Monthly List of East European Accession (EEAL) Vol. 6, no. 7, July 1957. Uncl.

KEIL, B.

Abs Jour: Ref Zhur.-Khimiya, 1958, No II

Author: O. Mikes, J. Vanecek, B. Meloun, B. Keil, V. Kostka, J. Kara.

Inst: Not given
Title: Multiple-Chamber Appliance for the Preparative Electro-phoresis.

Orig Pub: Chem. listy, 1957, 51, No 8, 1562-1569.

Abstract: A description of a modiefied multi-chamber appliance for the preparative zonal electrophoresis at the constant value of pH, in which are combined the advantages of 3-chamber Svenson's appliance with those electrophoretical ones to the work in an auxialiary medium. A rectifier with a regulated voltage of 0-10,000 v serves as a source of tension.

KEIL, Borivoj

CZECHOSLOVAKIA / Laboratory Equipment. Instruments, Theory, Construction, Use. F

Abs Jour : Ref Zhur - Khim., No 15, 1958, No 50138

Author : Kocent, Aleksandr; Brada, Zbynek; Keil, Borivoj.
Inst : Not given
Title : Gravimetric Fraction Collector for Chromatography.

Orig Pub : Chem. listy, 1957, 51, No. 8, 1575-1576.

Abstract : An electromagnetic arrangement, which enhances the reliability of the work of a gravimetric lever collector of fractions, is described. -- M. Ryba.

Card 1/1

KEIL, B.; Sorm, F.

"Proteins." XLVII. Cysteic-acid peptides from a partial chymotrypsinogen hydrolysate. XLVIII. Cysteic-acid peptides from a partial trypsin hydrolysate. In English. p. 1558.

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Praha, Czech., Vol. 24, No. 5, May 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6, Sept.59

Unclassified

MELOUN, B.; HOLEYSOVSKY, V.; VANECEK, J.; KEIL, B.; SORM, F.

Proteins. LIII. Peptides of aspartic acid and glumatic acid isolated from a chymotrypsinogen hydrolysate. In English. Coll.Cz.Chem. 24 no.9:3002-3006 S '59. (MEAI 9:5)

1. Department of Biochemistry, Chemical Institute, Czechoslovak Academy of Science, Prague.
(Proteins) (Peptides) (Aspartic acid) (Glutamic acid) (Chymotrypsin(gen)

VANECEK, J.; KEIL, B.; MELOUN, B.; SORM, F.

Proteins LIV. Isolation of some peptides from tryptic hydrolysates of chymotrypsinogen and diisopropylphosphoryltrypsin. In English. Coll.Cz.Chem. 24 no.9:3148-3153 S '59. (EEAI 9:5)

1. Department of Biochemistry, Czechoslovak Academy of Science, Prague.
(PROTEINS) (PEPTIDES) (CHYMOTRYPSINOGEN)
(TRYPSIN DIISOPROPYL PHOSPHATE)

KARADZOVA, M.; KEIL, B.; SORM, F.

Peptides isolated from acid hydrolysate of edestin. Coll Cz Chem 25 no.11:2878-2888 N '60. (EEAI 10:6)

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague.
(Peptides) (Edestin)

PRUSIK, Z.; KEIL, B.

An investigation of conditions of separating substances by high-voltage electrophoresis on paper. Coll Cz Chem 25 no.8:2049-2058 Ag '60. (EEAI 10:9)

1. Department of Biochemistry, Institute of Chemistry, Czechoslovak Academy of Science, Prague.

(Electrophoresis) (Separation)

VANECEK, J.; MELOUN, B.; KOSTKA, V.; KEIL, B.; SORM, F.

Proteins. LXI. Peptides isolated from peptic hydrolysate of chymotrypsinogen. Coll Cz Chem 25 no.9:2358-2368 S '60.
(EEAI 10:9)

1. Institute of Organic Chemistry and Biochemistry Czechoslovak Academy of Science, Prague.

(Proteins) (Peptides) (Chymotrypsinogen)

SORM, F.; KEIL, B.; VANECEK, J.; TOMASEK, V.; MIKES, O.; MELOUN, B.; KOSTKA, V.; HOLEYSOVSKY, V.

Proteins. LXIII. Lower structures in the chains of proteins. Coll Cz chem 26 no.2:531-578 F '61. (EEAI 10:9)

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague.

(Proteins)

HEYROVSKY, Jaroslav, dr., akademik, nositel Nobelovy ceny; JANAK, Jaroslav, inz.; VOLF, Milos Bohuslav, dr.; KEIL, Borivoj, Dr.Sc., laureat statni ceny; KOSSLER, Ivo, dr.

Observations of our famous collaborators on making new laboratory instruments. Tech praca 14 no.8:655-664 Ag '62.

1. Ceskoslovenska akademie ved (for Janak and Kossler).

S/058/62/000/012/033/048
A160/A101

AUTHORS: Keil, B., Šorm, F.

TITLE: On proteins. LXXI. An analysis of prote n structures from the aspect of amino acid interchanges

PERIODICAL: Referativnyy zhurnal, Fizika, no. 12, 1962, 36 - 37, abstract 12D260 ("Collect. Czechosl. Chem. Communs", no 5, 1962,v.27, 1310 - 1319, English; summary in Russian)

TEXT: The series of amino acids is compared to various porteins to find the symmetry or a similarity in the arrangement of amino acids along the polypeptide chain by taking into consideration a possible substitution of one amino acid by another. By using the method of symbols, it was shown that the symmetry principle occurs rather frequently in the arrangement of amino acids. For ribonuclease and C cytochrome it was discovered that a definite series type is most frequently found, i.e., a major part of the protein is built from several main series. This is particularly clearly apparent in the case of α- and β-chains of hemoglobin. Part 70 see ref. 12D259.

[Abstracter's note: Complete translation]
Card 1/1

Inst. Organic Chemistry Biochem, Czech AS, Prague

KEIL, B.; SORM, F.

On proteins. Part 73: Desulfuration of sulfur containing amino acids in peptides. Coll Cz Chem 27 no.7:1673-1677 Jl '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KEIL, B.; ZIKAN, J.; REXOVA, L.; SORM, F.

On proteins. Part 74: Hydrogenation of aromatic amino acids in peptides. Coll Cz Chem 27 no.7:1678-1686 Jl '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague (for Keil and Sorm). 2. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague (for Zikan). 3. Institute of Chemistry, Slovak Academy of Sciences, Bratislava (for Rexova).

KEIL, B.; MORAVEK, J.; DLOUHA, V.; FILIP, J.

On proteins. Part 75: Desulfuration and hyrogenation of amino acids by using tritium. Coll Cz Chem 27 no.7:1687-1691 Jl '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences and Institute for Research, Production and Utilization of Radioisotopes, Prague.

MIKES, O.; HOLEYSOVSKY, V.; TOMASEK, V.; KEIL, B.; SORM, F.

On proteins. Part 76 : Structure of peptides isolated from a tryptic digest of diisopropylphosphoryl-trypsin. Coll Cz Chem 27 no.8:1964-1987 Ag '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KEILOVÁ, H; KEIL, B.

Czechoslovakia

Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences -- Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 9, 1962, pp 2186-2191

"Proteinases of the Ehrlich Ascites Tumour. I. Basic Characterization of the Proteinases and Their Dependence on the Growth of the Tumour."

KEILOVÁ, H; KEIL, B.

Czechoslovakia

Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences -- Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 9, 1962, pp 2193-2200

"Proteinases of the Ehrlich Ascites Tumour. II Separation of Proteinases of the Ascites Fluid and Ascites Cells."

KEILOVA, H.; KEIL, B.

Proteinases of the Ehrlich ascites tumor. Part 1: Basic characterization of the proteinases and their dependance on the growth of the tumor. Coll Cz Chem 27 no.9:2186-2192 S '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KEILOVA, H.; KEIL, B.

Proteinases of the Ehrlich ascites tumor. Part 2: Separation of proteinases of the ascites fluid and ascites cells. Coll Cz Chem 27 no.9:2193-2201 S '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KEIL, B.; KEILOVA, H.; BARTOSEK, I.

On proteins. Part 80: Column extraction of proteins. Coll Cz Chem 27 no.12:2940-2945 D '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KEIL, B.; PRUSIK, Z.; MORAVEK, L.; SORM, F.

On proteins. Part 81: The disulfide bonds of α-chymotrypsinogen and peptides from its peptic hydrolysate. Coll Cz Chem 27 no.12: 2945-2955 D '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KEIL, B

CZECHOSLOVAKIA

MELOUN, B; KOSTKA, V; KEIL, B; SORM, F.

Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 10, 1963, pp 1749-2777

"On Proteins. LXXXIII. Peptides Isolated from the Peptic Digest of the Part of a Tryptic Hydrolysate of S-Sulpho-Chymotrypsinogen Insoluble in Acid Environment."

(4)

On proteins. Pts. 83-84. Coll Cz Chem 28 no.10:2749-2805 O '63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

STOKROVA,S.; KEIL,B.

A study of the course of tryptic hydrolysis of human serum albumin. Coll Cz Chem 28 no.11:2864-2873 N'63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague (for Keil). 2. Institute of Chemical Technology, Department of Physical Chemistry, Prague (for Stokrova).

DLOUHA,V.; KEIL,B.; SORM,F.

On proteins. Pt.85. Coll Cz Chem 28 no.11:2969-2976 N'63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

ZMRHAL, Z.; JEGOROV, C.; KEIL, B.

Proteins. Pt. 87. Coll Cz Chem 29 no.4:943-952 Ap '64.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

[redacted], B.; KEILOVA, H.

On proteins. Pt. 90. Coll Cz Chem 29 no.9:2206-2215 S '64.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

KRIIOVA, H.; KEIL, B.; SORM, F.

Proteases of Ehrlich ascites tumor. pt. 3. Coll Cz Chem 29 no.9: 2212-2222 S '64.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague. 2. Chairman, Advisory Board, "Collection of Czechoslovak Chemical Communications" (for Sorm).

KARADZHOVA, M. [Karadzhova, M.]; NEDKOV, P.T.; ATANASOV, B.; KEIL, B.

On proteins. Pt.86. Coll Cz Chem 29 no.2:551-556 F '64.

1. Institute of Organic Chemistry, Bulgarian Academy of Sciences, Sofia and Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

JEGOROV, G. [Yegorov, G.S.]; KEIL, B.; SORM, F.

On proteins. Pt.92. Coll Cz Chem 30 no.1:109-117 Ja '65.

1. Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague. 2. Permanent address: Institute of Natural Substances of the Academy of Sciences of the U.S.S.R., Moscow (for Jegorov). 3. Advisory Board Chariman, "Collection of Czechoslovak Chemical Communications" (for Sorm). Submitted February 5, 1964.

KEILOVA, H.; KEIL, B.

Proteinases of Ehrlich ascites tumour. Pt. 4. Coll Cz Chem 29 no. 9:2272-2276 S '64.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

DLOUHA, V.; KÉIL, B.; SORM, F.

Structure of the peptides isolated from the tryptic hydrolysate of the chain of edestin. Coll Cz chem 29 no.8:1835-1850 Ag '64.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague. 2. Chairman, Advisory Board, "Collection of Czechoslovak Chemical Communications" (for Sorm).

FRANEK, F.; KEIL, B.

Structural differences between gamma-globulin chains. Coll Cz Chem 29 no. 3:847-849 Mr '64.

1. Microbiological Institute and Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

CZECHOSLOVAKIA

KEIL, B.

HLAVOVÁ, L; KOPEC, Z; KEIL, B

1. Institute of Chemistry, Slovak Academy of Sciences, Bratislava - (for ?); 2. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague - (for ?)

Prague, Collection of Czechoslovak Chemical Communications, No 2, February 1967, pp 678-684

"Isolation and certain properties of wheat β-amylase."

KEIL, B.; VOLKR, [illegible] (Prague)

Pour point depressants in transformer oils. Ropa a uhlie 6 no.10: 291-296 O '64.

SAXE, H.; MILOWSKY, L.; KEIL, G.

Evaluation of used engine oils. Ropa a uhlie 6 no.10:314-317 O '64.

1. Institute of Fuels, Freiberg, German Democratic Republic.

KEIL, Gerhard, dipl. chem.; MENZEL, N.; APEL, W.

Oxidation resistance of lubricating oils. Ropa a uhlie 6 no.8: 232-236 Ag '64.

1.Research Worksite, Mineralolwerk National Enterprise, Lutzkendorf, German Democratic Republic.

KEIL. I

[illegible]

[illegible]. (Zememeřictvi. Praha. Vol. 4, no. 5, May, 1954)

East

[illegible]